

PATENT COOPERATION TREATY



From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/005606

International filing date (day/month/year)
18.03.2005

Priority date (day/month/year)
24.03.2004

International Patent Classification (IPC) or both national classification and IPC
H01M8/02, H01M8/12

Applicant
HONDA MOTOR CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

§ 19 補正

06.1.22

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**International application No.
PCT/JP2005/005606

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/005606

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2005/005606

SECTION V -----

1. Prior art

Documents (1) - (8) cited in the **International Search Report**, are considered to represent relevant prior art ; the numbering will be adhered to in the rest of the procedure.

- (1) EP-A-1 531 511
- (2) WO-A-2004/068 622
- (3) EP-A-1 209 753
- (4) EP-A-1 202 369
- (5) JP-A-8,208333
- (6) JP-11,130595
- (7) JP-11,071169
- (8) JP-A-2002/252005

2. Novelty

2.1 Documents (1) - (2) are only relevant for the purposes of **Rules 33.1 c, 64.3** and **70.10 PCT** and are thus not taken into account at this stage. If the priority date is not valid for the complete claimed subject-matter, document (2) may become relevant prior art in a possible regional / national phase.

2.2 From 'at least' the documents (3) - (8) an *electrolyte electrode assembly* is known comprising an anode, a cathode and 2 separators. The only technical feature not being disclosed in the cited prior art is the layer provided between cathode and se-parator. Accordingly, the requirements of **Article 33 (2) PCT** appear to be met.

3. Inventive step

For the assessment of inventive step (**Article 33 (3) PCT**) on an objective basis in accordance with the "problem-solution approach" (**Rule 5.1 (a) (iii) PCT**) it is necessary to establish the closest state of the art forming the starting point, to determine in the light thereof the technical problem which the invention addresses and to examine the obviousness of the claimed solution to this problem in view of the state of the art.

3.1 Starting from the *electrolyte electrode assembly* of the prior art (3) or (4) the problem underlying the present application can be considered to be the provision of an alternative/further *electrolyte electrode assembly* sandwiched between a pair of separa-

tors (see also p.1, 1.7-12 of the application in suit). From citations (4)- (8) material capable of inducing oxygen reduction is disclosed. For the skilled person starting from the *electrolyte electrode assembly* disclosed in (3) or (4) and wishing to solve the above addressed problem with a **reasonable expectation of success** would expect the claimed multi layer configuration to be useful as *electrolyte electrode assembly*. For the skilled person who selects the above described material known from the prior art (4) - (8) there is a clear **incentive** that the layer would be useful for an *electrolyte electrode assembly*. The skilled person would have been able to **predict with certainty** the claimed *electrolyte electrode assembly* to be an alternative to those of the cited prior art. Accordingly, the solution of the above defined problem i.e. the provision of an alter-native *electrolyte electrode assembly* does not involve **inventive step** in the sense of **Article 33 (3) PCT**.

3.2 Since the provision of a further *electrolyte electrode assembly* is considered to be obvious, an **inventive step** could be recognized if the Applicant could demonstrate that the presently claimed *electrolyte electrode assembly* illustrate any unpredictable (qualitatively or quantitatively) effects. As far as the **closest prior art** is concerned it is noted that the modifying feature should not only characterize the invention in the claim, i.e. distinguish it from the prior art, but must contribute causally to the improvement of the capability thereby achieved. In the present case the electrodes have to be compared with those of the respective closest prior art which only differ by the novelty rendering feature but all the other parts have to be the same. Since such unexpected effects has not been demonstrated the requirements of **Article 33 (3) PCT** are not met.

3.3 Finally, it is realized that the Applicant is entitled to claim all obvious modifications of what he has described and that alternative variations have to be supported by a certain number of examples. Furthermore, the extent of a "reasonable generalisation" only depends upon the question of the relative distance to the prior art. It is stressed that only such *electrolyte electrode assembly* can be claimed which are a solution to the above stated problem i.e. which illustrate the alleged unexpected effects. If necessary the claims have to be restricted to such *electrolyte electrode assemblies*.

3.4 Any information the applicant may wish to submit concerning the subject-matter of the invention, for example further details of its advantages or of the problem it solves, and for which there is no basis in the application as filed, should be confined to the letter of reply and not be incorporated into the application (**Articles 34 (2) (b) and 19 (2) PCT**).

3.5 The Applicant is requested to file amendments by way of replacement pages in the manner stipulated by **Rule 66.8 (a) PCT**. In particular, fair copies of the amendments

